

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No: 10/624,305 ) Attorney  
Filed: July 22, 2003 ) Docket Number: 200308790-1  
Inventors: Tom Ruhe et al. ) Confirmation No.: 7802  
Title: Variable Support Structure and ) Group Art Unit: 2625  
Media Sheet Separator ) Examiner: Nguyen, Allen H.  
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**APPEAL BRIEF**

**1. REAL PARTY IN INTEREST.**

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249 Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holding, LLC.

**2. RELATED APPEALS AND INTERFERENCES.**

There are no other appeals or interferences known to Appellants, Appellants' legal representative or the Assignee which will affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**3. STATUS OF CLAIMS.**

Claims 1-12 and 14-22 are pending. Claims 13 and 23-25 have been canceled. Claims 1-11 and 18-22 have been withdrawn by the Examiner. Claims 12 and 14 have been rejected. The status of Claims 15-17 is unclear. The final Office Action indicates at page 7 that Claim 15 is objected to as depending from a rejected base claim but would be allowable if rewritten in independent form. However, the final Office Action

also indicates at pages 5-6 that Claims 16 and 17 are rejected despite the fact that Claims 16 and 17 depend from Claim 15. Appellants appeal the rejection of Claims 12 and 14, and Claims 15-17 if those claims also are rejected.

**4. STATUS OF AMENDMENTS.**

No amendments were filed after the final action.

**5. SUMMARY OF CLAIMED SUBJECT MATTER.**

The following is provided pursuant to Rule 41.37(c)(1)(v) which requires "a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, which shall refer to the specification by page and line number, and to the drawings if any, by reference characters." Nothing in this Section 5 should be construed to limit the scope of any of the claims involved in the appeal, which are enumerated in full in Appendix I to this Appeal Brief. Where, as here, the text of the specification is delineated by paragraph numbers in the application rather than by page and line numbers, the paragraph numbers are referenced in this Appeal Brief. Such usage is believed to comply with Rule 41.37(c)(1)(v).

Independent Claim 12. Claim 12 is directed to a sheet media input structure for a printer or other sheet media processing device. The structure of Claim 1 includes a sheet media supporting surface and a media sheet separator downstream from the supporting surface along a media path that extends from the supporting surface to and along the separator. For example, base panel 64 and slider 70 define sheet media supporting surfaces 76, 78 and 80, shown in Figs. 4 and 12, and described in the Specification at paragraph 0021. One example of the media sheet separator of Claim 12 is illustrated in Figs. 16-18, reproduced below. The separator, separator assembly 90 in Figs. 16-18, is configured to separate a top sheet on the stack from a next-to-top sheet in the stack by resisting the movement of sheets along the media path. Specification paragraph 0027. Separator assembly 90 comprises a span of flexible material and a plurality of supports supporting the span. E.g., pliable sheet 94 spanning support ridges 116 in Figs. 16-18. The supports, ridges 116 in Figs. 16-18, are oriented relative to one another such that the degree of resistance of the separator to the

movement of sheets along the media path varies along the length of the separator from a greater resistance at an upstream part of the separator to a lesser resistance at a downstream part of the separator. Specification paragraph 0029.

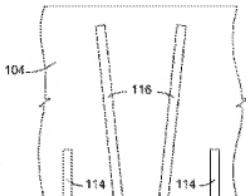


FIG. 16

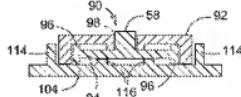


FIG. 18

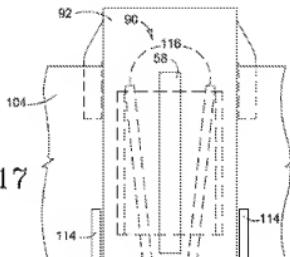


FIG. 17

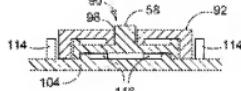


FIG. 19

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#### 6. GROUNDS OF REJECTION TO BE REVIEWED.

1. Claims 12, 14 and 16 stand rejected under Section 102 as being anticipated by Olson 5269506.
2. Claim 17 stands rejected under Section 103 as being obvious over Olson in view of Oleksa 5895040.

#### 7. ARGUMENT.

##### GROUND NO. 1

**Claims 12, 14 and 16 stand rejected under Section 102 as being anticipated by Olson 5269506.**

Claims 12, 14 and 16 stand rejected under Section 102 as being anticipated by Olson 5269506.

A claim is anticipated only if each and every element as set forth in the claim is expressly or inherently described in a single prior art reference. MPEP 2131 (citing Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). To support the Section 102 rejection of Claim 1, Olson must describe the claimed features with sufficient clarity and detail to establish that the subject matter existed and that its existence was recognized by those having ordinary skill in the pertinent art. See e.g., ATD Corp. v. Lydall, Inc., 159 F.2d 534 (Fed. Cir. 1998); Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452 (Fed. Cir. 1984); and W. L. Gore & Associates v. Garlock, Inc., 721 F.2d 1540 (Fed. Cir. 1983).

Independent Claim 12. Claim 12 recites a sheet separator that includes a span of flexible material and a plurality of supports supporting the span. The supports are oriented relative to one another such that the degree of resistance of the separator to the movement of sheets along the media path varies along the length of the separator from a greater resistance at an upstream part of the separator to a lesser resistance at a downstream part of the separator.

In Olson, by contrast, the difference between the lower frictional force surface region 40 and the higher frictional force surface region 42 is achieved by changing the composition of the surface at each region 40, 42, not by varying the orientation of underlying supports. The pertinent passages and figures from Olson are reproduced below – for clarity, part numbers 32 (resilient pad) and 36 (upstanding portions) are added to the excerpt from Olson Fig. 2 below and part numbers 36 (upstanding portions), 40 (lower friction surface region) and 42 (higher friction surface region) are added to the reproduction of Olson Fig. 3. Key passages from the text in Olson are underlined.

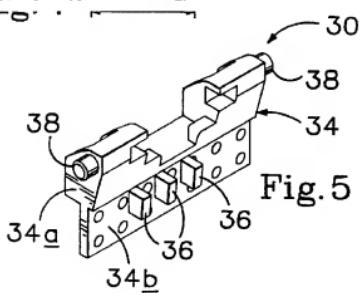
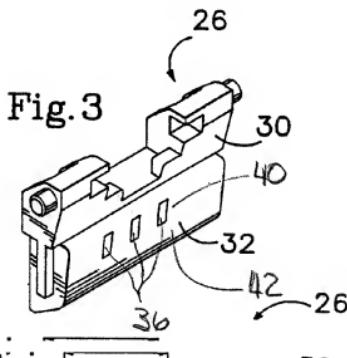
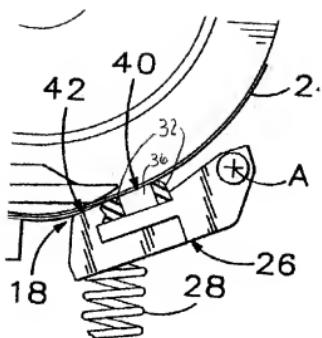
Olson column 3, line 61 through column 4, line 15 reads as follows.

The height of the upstanding portions is generally constant, corresponding to the thickness of the separator's pad when initially formed (see FIG. 2).

Although the thickness of the pad decreases due to wear, the thickness of the upstanding portions remains relatively constant.

In the depicted embodiment, pad 32 substantially surrounds the upstanding portions, extending forwardly therefrom a distance approximately twice the length of the upstanding portions. The pad is formed from a frictionally adherent material such as rubber, and is effective in selectively opposing passage of paper thereacross. As best shown in FIGS. 2 and 3, the forward most portion of the pad angles somewhat downwardly as it extends from the upstanding members. The edges of the pad are rounded to better accommodate sheet passage thereover.

Referring once again to FIG. 2, and considering with particularity the effect of employing the just-described separator, the reader will understand that such separator is configured so as to oppose input of second sheet 24b until after the top sheet 24a is taken completely into the printer. This is accomplished without unduly opposing input of top sheet 24a. Such effect is due to the varying frictional forces applied by the separator in different regions thereof. The top sheet engages the separator in a first surface region 40, such region being characterized by the application of a relatively low first frictional force against the sheet passing thereacross. This paper-to-pad frictional force, it will be understood, is less than the corresponding frictional force between the rollers and the first sheet. This relatively low frictional force is at least partially due to the positioning of the upstanding portions, such portions offering a relatively low frictional force in opposition to sheet passage as described above. In contrast, the second sheet engages the separator in a second surface region 42. Region 42 is characterized by a higher second frictional force applied to the second sheet. The second region is preferably defined entirely by pad 32. The pad, as described above, is formed from a frictionally adherent material so as to oppose sheet passage thereacross. This paper-to-pad frictional force for the second sheet is thus greater than the paper-to-paper frictional forces between the first and second sheets and the papers are separated as they enter the input port.



The lower friction of region 40 in Olson is achieved by combining upstanding portions 36 and pad 32. The higher friction region 42 in Olson is achieved by omitting upstanding portions 36 – region 42 is all pad 32. The Examiner's apparent assertion in the final Action that the mere presence of lower and higher friction regions in Olson somehow necessarily implies supports oriented as in Claim 12 is plainly not correct.

Also, the Examiner does not explain in the final Action which part in Olson is the claimed span of flexible material and which parts are the claimed plurality of supports. Apparently the Examiner is asserting that resilient pad 32 in Olson is a span of flexible material and that rigid body 30 is a plurality of supports supporting the span. Any such assertion is not correct.

Body 30 in Olson is a single part. "The body [30] is formed from a rigid, wear-resistant material such as nylon, and is generally molded as a unitary piece." Olson column 3, lines 9-11. See also Olson Fig. 5. Upstanding portions 36 on body 30 do not support pad 32. Rather, upstanding portions 36 extend through pad 32. "[P]ad 32 substantially surrounds the upstanding portions...." Olson column 3, lines 44-45. See also Olson Figs. 2 and 3. Thus, body 30 in Olson is not a plurality of supports as claimed.

Resilient pad 32 in Olson is not a span of flexible material. Pad 30 does not span anything, at least not in the context of Claim 12. During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." MPEP 2111. The dictionary definition of a span is "**2:** an extent, stretch, reach, or spread between two limits: as **a:** a limited space (as of time) ; especially : an individual's lifetime **b:** the spread or extent between abutments or supports (as of a bridge) ; *also* : a portion thus supported." Merriam-Webster Online Dictionary. The Specification contains numerous examples that a span means the spread or extent of material between supports. See, for example, the embodiments shown in Figs. 16-23 in which a pliable sheet 94 extends between ridges/supports 116 in Figs. 16-23, Specification paragraphs 0028 and 0030. There is no such span in Olson.

In summary, Olson does not teach the following limitations in Claim 12:

1. supports oriented relative to one another such that the degree of resistance varies along the length of the separator;
2. a span of flexible material; and
3. a plurality of supports supporting the span.

For each of the distinguishing features noted above, therefore, the Examiner has failed to establish a *prima facie* case of anticipation as to Claim 12. The rejection of Claim 12 should be reversed.

Claim 14 Depending From Claim 12. Claim 14 depends from Claim 12 and recites the further limitations that the plurality of supports comprise first and second supports oriented relative to one another such that a distance between the supports at the downstream part of the separator is greater than a distance between the supports at the upstream part of the separator. As noted above, the difference between the lower frictional force surface region 40 and the higher frictional force surface region 42 in Olson is achieved by changing the composition of the surface at each region 40, 42, not by varying the orientation of underlying supports.

Nevertheless, the Examiner appears to argue the varying forces themselves act as the claimed supports, at pages 4-5 of the final Action, as follows:

Regarding claim 14, Olson '506 discloses the structure (Separator 26, figs. 3-5), wherein:

the span of flexible material comprises a pliable sheet (separator 26 is made up of a generally rigid body 30 and a resilient pad 32, col. 3, lines 1-11, figs. 3-4) and the plurality of supports (i.e., due to the varying frictional forces applied by the separator in different regions; Col. 3, lines 60-63) comprise first and second supports extending along and supporting the sheet (i.e., the varying frictional forces applied by the separator in different regions; Col. 3, lines 57-60), the supports oriented relative to one another such that a distance between the supports at the downstream part of the separator is greater than a distance between the supports at the upstream part of the separator (i.e., pad 32 substantially surrounds the upstanding portions, extending forwardly therefrom a distance approximately twice the length of the upstanding portions; Col. 3, lines 44-47)... (emphasis in original)

The Examiner seems to be arguing the varying frictional forces in Olson are themselves the very supports that help generate those forces. Of course, the

varying forces in Olson cannot be both the structure and the effect of the structure. Moreover, the varying frictional forces in Olson are not applied unless and until the device is operating and a sheet of paper or other printable media is moving past pad 32. That is to say, these forces and thus the alleged "supports" do not even exist at some moments in time. Finally, and with due respect, it seems non-sensical to say there is somehow a distance between these forces (the alleged supports) in Olson that is greater at one part of the separator than at another part of the separator. Perhaps Appellants have misunderstood the Examiner's position in this regard. In any event, it seems quite clear that Olson does not disclose supports oriented as in Claim 14 with sufficient clarity and detail to establish that the subject matter existed and that its existence was recognized by those having ordinary skill in the pertinent art, as required to support the Section 102 rejection of Claim 14.

Claim 16 Depending From Claim 15. Claim 16 depends from Claim 15 (which depends from independent Claim 12). Claim 15 recites V shaped supports. The Examiner does not address this and other limitations of Claim 15 in the rejection of Claim 16. On the contrary, the Examiner indicates at page 7 of the final Action that Claim 15 is allowable over Olson. Claim 16 depending from Claim 15 is allowable for these same reasons. (And, in fact, Olson does not disclose V shaped supports as recited in Claim 15.) The rejection of Claim 16 should be withdrawn.

#### GROUND NO. 2

**Claim 17 stands rejected under Section 103 as being obvious over Olson in view of Oleksa 5895040.**

Claim 17 stands rejected under Section 103 as being obvious over Olson in view of Oleksa 5895040.

Claim 17 depends from Claim 15 (which depends from independent Claim 12). Claim 15 recites V shaped supports. The Examiner does not address this and other limitations of Claim 15 in the rejection of Claim 17. On the contrary, the Examiner indicates at page 7 of the final Action that Claim 15 is allowable over Olson. Claim 17 depending from Claim 15 is allowable over the combination of Olson and Oleksa for

these same reasons. (And, in fact, neither Olson nor Oleksa disclose V shaped supports as recited in Claim 15.) The rejection of Claim 17 should be withdrawn.

Respectfully submitted,

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## APPENDIX I -- CLAIMS INVOLVED IN THE APPEAL

1.(withdrawn) A structure, comprising:  
a pliable sheet; and  
first and second stationary supports supporting the sheet, the supports oriented relative to one another such that a distance between the supports at one part of the sheet is greater than a distance between the supports at another part of the sheet.

2.(withdrawn) The structure of claim 1, wherein the supports are rigid.

3.(withdrawn) The structure of claim 1, wherein the first support is curved.

4.(withdrawn) The structure of claim 1, wherein the first and second supports are curved.

5.(withdrawn) The structure of claim 1, wherein each of the first and second supports comprise discontinuous segments, first ones of the segments spaced apart a first distance at one part of the sheet and second ones of the segments spaced apart a second distance less than the first distance at another part of the sheet.

6.(withdrawn) The structure of claim 1, wherein the supports are integral to the sheet.

7.(withdrawn) A structure, comprising:  
a pliable sheet;  
first and second supports extending along and supporting the sheet, the supports oriented relative to one another such that a distance between the supports at one part of the sheet is greater than a distance between the supports at another part of the sheet; and  
a protrusion extending along and protruding from the sheet between the supports.

8.(withdrawn) The structure of claim 7, wherein the supports extend along a first side of the sheet and the protrusion protrudes from a second side of the sheet opposite the first side.

9.(withdrawn) The structure of claim 7, wherein the protrusion comprises a pliable protrusion.

10.(withdrawn) A structure, comprising:  
a pliable sheet;  
a generally V shaped support extending along and contacting one side of the sheet; and  
a pliable strip attached to or integral with the sheet, the strip positioned between the supports along a second side of the sheet opposite the first side.

11.(withdrawn) A structure, comprising:  
a span of flexible material;  
a pair of elongated supports supporting the span, the supports oriented relative to one another in a generally V shaped configuration such that a distance between the supports at one part of the span is greater than a distance between the supports at another part of the span; and  
an elastomeric pad affixed to or integral with the flexible material between the supports.

12.(previously presented) A sheet media input structure for a sheet media processing device, comprising:

a sheet media supporting surface; and  
a media sheet separator downstream from the supporting surface along a media path that extends from the supporting surface to and along the separator, the separator configured to separate a top sheet on the stack from a next-to-top sheet in the stack by resisting the movement of sheets along the media path; and wherein

the separator comprises a span of flexible material and a plurality of supports supporting the span, the supports oriented relative to one another such that the degree of resistance of the separator to the movement of sheets along the media path varies along the length of the separator from a greater resistance at an upstream part of the separator to a lesser resistance at a downstream part of the separator.

13.(canceled)

14.(previously presented) The structure of claim 12, wherein:  
the span of flexible material comprises a pliable sheet and the plurality of supports comprise first and second supports extending along and supporting the sheet, the supports oriented relative to one another such that a distance between the supports at the downstream part of the separator is greater than a distance between the supports at the upstream part of the separator; and

the separator further comprises a protrusion extending along and protruding from the sheet between the supports.

15.(previously presented) The structure of claim 12, wherein:  
the plurality of supports comprise a pair of elongated supports supporting the span, the supports oriented relative to one another in a generally V shaped configuration such that a distance between the supports at a first part of the span is greater than a distance between the supports at a second part of the span; and  
the separator further comprises an elastomeric pad affixed to or integral with the flexible material between the supports.

16.(original) The structure of claim 15, wherein the second part of the span is upstream along the media path from the first part of the span.

17.(original) The structure of claim 16, wherein the pad is oriented at an obtuse angle relative to the supporting surface.

18.(withdrawn) A sheet media input structure for a sheet media processing device, comprising:

a sheet media supporting surface; and

a media sheet separator downstream from the supporting surface along a media path that extends from the supporting surface to and along the separator, the separator comprising

a span of flexible material,

a pair of elongated supports supporting the span, the supports oriented relative to one another in a generally V shaped configuration such that a distance between the supports at a first part of the span is greater than a distance between the supports at a second part of the span, the second part of the span upstream along the media path from the first part of the span, and

an elastomeric strip affixed to or integral with the flexible material between the supports, the pad oriented at an obtuse angle relative to the supporting surface.

19.(withdrawn) The structure of claim 18, further comprising a sloped wall oriented at an obtuse angle relative to the supporting surface and wherein the strip extends along the wall.

20.(withdrawn) A printer, comprising:

a print engine;

a sheet media input surface;

a pick/feed mechanism operative to move media sheets from the input structure to the print engine along a media path;

a controller configured to control operations of the print engine and the pick/feed mechanism; and

the input structure including a sheet media supporting surface and a media sheet separator downstream from the supporting surface along the media path, the separator configured to separate a top sheet on the stack from a next-to-top sheet in the stack by resisting the movement of sheets along the media path and wherein the separator comprises a span of flexible material and a plurality of supports supporting the span, the

supports oriented relative to one another such that the degree of resistance of the separator to the movement of sheets along the media path varies along the length of the separator from a greater resistance at an upstream part of the separator to a lesser resistance at a downstream part of the separator.

21.(withdrawn) The printer of claim 20, wherein:

the span of flexible material comprises a pliable sheet and the plurality of supports comprise first and second supports extending along and supporting the sheet, the supports oriented relative to one another such that a distance between the supports at the downstream part of the separator is greater than a distance between the supports at the upstream part of the separator; and

the separator further comprises a protrusion extending along and protruding from the sheet between the supports.

22.(withdrawn) The printer of claim 20, wherein:

the plurality of supports comprise a pair of elongated supports supporting the span, the supports oriented relative to one another in a generally V shaped configuration such that a distance between the supports at a first part of the span is greater than a distance between the supports at a second part of the span; and

the separator further comprises an elastomeric pad affixed to or integral with the flexible material between the supports.

23-25. (canceled)

**APPENDIX II -- EVIDENCE SUBMITTED UNDER RULES 130, 131 OR 132**

none

**APPENDIX III -- RELATED PROCEEDINGS**

none